

**WAVEFRONT RECONSTRUCTION USING A FOURIER  
TRANSFORMATION ALGORITHM**

**ABSTRACT OF THE DISCLOSURE**

5       The present invention provides methods, systems and software for generating  
a wavefront elevation map using Fourier transformation algorithms. In one embodiment, the  
present invention provides a method of reconstructing optical tissues of an eye. The method  
comprises transmitting an image through the optical tissues of the eye. The surface gradients  
from the transmitted image are measured across the optical tissues of the eye. A Fourier  
transform algorithm is applied to the surface gradients to reconstruct a surface that  
10       corresponds to the optical tissues of the eye.

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